



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0952; Project Identifier 2019-CE-039-AD]

RIN 2120-AA64

Airworthiness Directives; Diamond Aircraft Industries GmbH Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for certain Diamond Aircraft Industries GmbH (DAI) Model DA 42, DA 42 M-NG, and DA 42 NG airplanes. This proposed AD was prompted by mandatory continuing airworthiness information (MCAI) issued by the aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as dissolved or detached fuel tank hose material entering the main fuel tank chambers, which could result in restricted fuel flow with consequent fuel starvation. This proposed AD would require removing the fuel tank connection hoses from service and inspecting the fuel tank connection hoses for damage and detached rubber material. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Diamond Aircraft Industries GmbH, N.A. Otto-Straße 5, A-2700 Wiener Neustadt, Austria; phone: +43 2622 26700; fax: +43 2622 26780; email: office@diamond-air.at; website: <https://www.diamondaircraft.com>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0952; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the MCAI, any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Penelope Trease, Aviation Safety Engineer, General Aviation & Rotorcraft Section, International Validation Branch, FAA, 26805 E. 68th Avenue, Denver, CO 80249; phone: (303) 342-1094; fax: (303) 342-1088; email: penelope.trease@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2021-0952; Project Identifier 2019-CE-039-AD” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Penelope Trease, Aviation Safety Engineer, General Aviation & Rotorcraft Section, International Validation Branch, FAA, 26805 E. 68th Avenue, Denver, CO 80249. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The European Union Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2019-0218, dated September 3, 2019 (referred to after this as “the MCAI”), to address an unsafe condition on certain DAI Model DA 42, DA 42M, DA 42 M-NG, and DA 42 NG airplanes. The MCAI states:

Reports were received of dissolved fuel tank connections hoses. Rubber parts were found within the fuel tank. The investigation results showed that the affected parts are limited to 2 isolated batches, some of which were installed on the production line. Other affected parts have been supplied as spare for in-service replacement.

This condition, if not corrected, could lead to restricted fuel flow from the tank, possibly resulting in fuel starvation and consequent reduced control of the aeroplane.

To address this potential unsafe condition, DAI issued the applicable MSB [Mandatory Service Bulletin], providing instructions to identify and replace the affected parts. The applicable MSB identifies the MSN [manufacturer serial numbers] of the aeroplanes on which affected parts were installed during aeroplane production. The applicable MSB also indicates that any other aeroplane may be affected, if an affected part supplied as spare was installed.

For the reason described above, this [EASA] AD requires removal and replacement of the affected parts, and, if a removed affected part is found damaged, inspection of the fuel tank chambers and removal of any detached rubber material. This [EASA] AD also prohibits (re)installation of any affected parts.

You may examine the MCAI in the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0952.

Related Service Information under 1 CFR Part 51

The FAA reviewed Diamond Aircraft Mandatory Service Bulletin (MSB) 42-138 / MSB 42NG-080, dated July 1, 2019 (issued as one document) published with Diamond Aircraft Work Instruction (WI) MSB 42-138 / WI-MSB 42NG-080, dated July 1, 2019 (issued as one document) attached. This service information identifies the list of affected fuel tank connection hoses and also contains procedures for replacing the fuel tank connection hose and inspecting the main fuel tank chambers. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

FAA's Determination

This product has been approved by the aviation authority of another country and is approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI and service information referenced above. The FAA is issuing this NPRM after determining the unsafe condition described previously is likely to exist or develop on other products of the same type design.

Proposed AD Requirements in This NPRM

This proposed AD would require removing the affected fuel tank connection hoses from service. This proposed AD would also require inspecting the fuel tank connection hoses and, if there is damage, inspecting the main fuel tank chambers and removing any detached rubber material.

Differences Between this Proposed AD and the MCAI or Service Information

The MCAI applies to the Model DA 42 M airplane and this proposed AD would not because it does not have an FAA type certificate.

The service information specifies reporting information to DAI, and this proposed AD would not require reporting.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 192 airplanes of U.S. registry. The FAA estimates that it would take about 30 work-hours to do the actions of this proposed AD and require a part costing \$188. The average labor rate is \$85 per work-hour. Based on these figures, the FAA estimates the cost to do the actions of this proposed AD on U.S. operators to be \$525,696 or \$2,738 per airplane.

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority

because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Would not affect intrastate aviation in Alaska, and
- (3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

- 2. The FAA amends § 39.13 by adding the following new airworthiness directive:

Diamond Aircraft Industries GmbH: Docket No. FAA-2021-0952; Project Identifier 2019-CE-039-AD.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to:

(1) Diamond Aircraft Industries GmbH (DAI) Model DA 42 NG airplanes, serial numbers (S/N) 42.N303 through 42.N314, 42.N319, and 42.N320, certificated in any category, with a fuel tank connection hose part number (P/N) D4D-2817-10-70 installed; or

(2) DAI Models DA 42, DA 42 NG, and DA 42 M-NG airplanes, all serial numbers, certificated in any category, with a fuel tank connection hose P/N D4D-2817-10-70 identified in the Technical Details, section I.11, of Diamond Aircraft Mandatory Service Bulletin MSB 42-138 / MSB 42NG-080, dated July 1, 2019 (issued as one document) (MSB 42-138/42NG-080), installed.

(d) Subject

Joint Aircraft System Component (JASC) Code 2810, Fuel Storage.

(e) Unsafe Condition

This AD was prompted by mandatory continuing airworthiness information (MCAI) issued by the aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as dissolved or detached fuel tank hose material entering the main fuel tank chambers. The FAA is issuing this AD to prevent restricted fuel flow, which could result in fuel starvation. The unsafe condition, if not addressed, could result in fuel starvation and reduced control of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

(1) Within 100 hours time-in-service (TIS) after the effective date of this AD or within 4 months after the effective date of this AD, whichever occurs first, replace the main fuel tank connection hoses in accordance with the Instructions, sections III.1 and III.2, in DAI Work Instruction WI-MSB 42-138 and WI-MSB 42NG-080, Revision 0,

dated July 1, 2019, (issued as one document) attached to MSB 42-138/42NG-080. Instead of P/N D4D-2817-10-70_01, you may also replace a fuel tank connection hose with P/N D4D-2817-10-70 that is not identified in paragraph (c) of this AD.

(2) As of the effective date of this AD, do not install a fuel tank connection hose P/N D4D-2817-10-70 identified in paragraph (c) of this AD on any airplane.

(h) No Reporting Requirement

This AD does not require you to report information as specified in the Instructions, step III.1.12, in DAI Work Instruction WI-MSB 42-138 / WI-MSB 42NG-080 (single document), Revision 0, dated July 1, 2019, which is co-published as one document with MSB 42-138/42NG-080.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (j)(1) of this AD or email to: 9-AVS-AIR-730-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(j) Related Information

(1) For more information about this AD, contact Penelope Trease, Aviation Safety Engineer, General Aviation & Rotorcraft Section, International Validation Branch, FAA, 26805 E. 68th Avenue, Denver, CO 80249; phone: (303) 342-1094; fax: (303) 342-1088; email: penelope.trease@faa.gov.

(2) Refer to European Union Aviation Safety Agency (EASA) AD 2019-0218, dated September 3, 2019, for more information. You may examine the EASA AD in the AD docket at <https://www.regulations.gov> by searching for and locating it in Docket No. FAA-2021-0952.

(3) For service information identified in this AD, contact Diamond Aircraft Industries GmbH, N.A. Otto-Straße 5, A-2700 Wiener Neustadt, Austria; phone: +43 2622 26700; fax: +43 2622 26780; email: office@diamond-air.at; website: <https://www.diamondaircraft.com>. You may view this referenced service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

Issued on October 27, 2021.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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